Surge arrester

2-electrode arrester

Series/Type:	**A80-A230XSMD**
Ordering code:	**B88069X1620T602**
Version/Date:	Issue 05 / 2014-01-08

Surge arrester — B88069X1620T602

2-electrode arrester — A80-A230XSMD

Features

- Standard size
- Fast response time
- High current rating
- Stable performance over life
- Very low capacitance
- High insulation resistance
- Excellent SMD handling
- RoHS-compatible

Applications

- Branch exchange (MDF)
- Line protection
- Subscriber protection

Electrical specifications

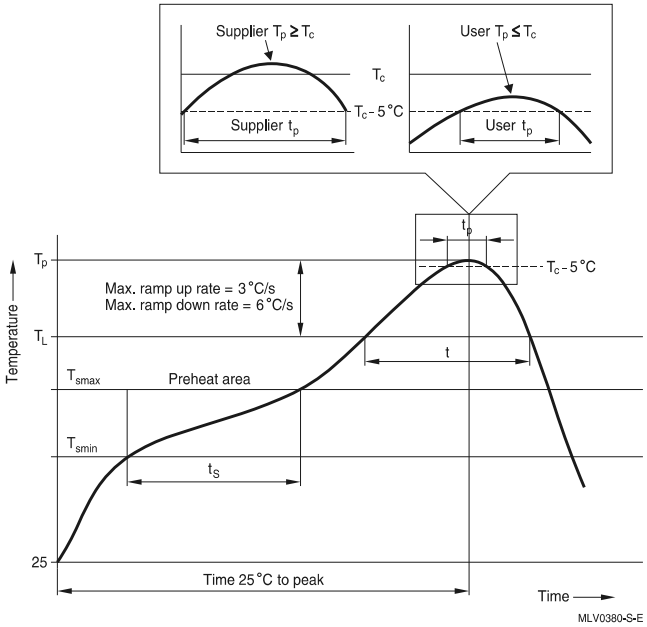
DC spark-over voltage [1) 2)]	230 ± 20	V %
Impulse spark-over voltage		
at 100 V/µs - for 99% of measured values	< 500	V
at 100 V/µs - typical values of distribution	< 450	V
at 1 kV/µs - for 99% of measured values	< 650	V
at 1 kV/µs - typical values of distribution	< 550	V
Service life [8)]		
10 operations 50 Hz; 1 s	20	A
1 operation 50 Hz; 0.18 s (9 cycles)	100	A
10 operations 8/20 µs	20	kA
1 operation 8/20 µs	25	kA
1 operation 10/350 µs	2.5	kA
300 operations 10/1000 µs	200	A
Insulation resistance at 100 V_{DC}	> 10	GΩ
Capacitance at 1 MHz	< 1.5	pF
Arc voltage at 1 A Glow to arc transition current Glow voltage	~ 15 ~ 0.5 ~ 60	V A V
Weight	~ 1.5	g
Operation and storage temperature	-40 ... +90	°C
Climatic category (IEC 60068-1)	40/ 90/ 21	
Marking, blue negative	EPCOS 230 YY O 230 - Nominal voltage YY - Year of production O - Non radioactive	

1) At delivery AQL 0.65 level II, DIN ISO 2859
2) In ionized mode

Terms in accordance with ITU-T Rec. K.12; IEC 61663-2 and IEC 61643-311.

Soldering parameters

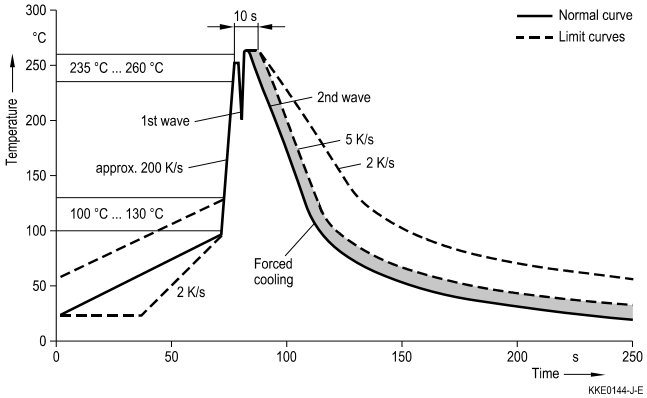
Reflow soldering



Reflow profile features		Sn- Pb eutectic assembly	Pb-free assembly
Preheat and soak - Temperature min - Temperature max - Time	 T_{smin} T_{smax} t_{smin} to t_{smax}	 100 °C 150 °C 60 ... 120 s	 150 °C 200 °C 60 ... 180 s
Average ramp-up rate	T_{smax} to T_p	max. 3 °C/ s	max. 3 °C/ s
Liquidous temperature Time at liquidous	T_L t_L	183 °C 60 ... 150 s	217 °C 60 ... 150 s
Peak package body temperature *, Classification temperature **	T_p, T_C	220 ... 235 °C **	245 ... 260 °C **
Time (t_p) ** within 5 °C of the specified classification temperature (T_C)		20 s ***	30 s ***
Average ramp-down rate	T_p to T_{smax}	max. 6 °C/ s	max. 6 °C/ s
Time 25 °C to peak temperature		max. 6 min	max. 8 min

* = Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.
** = For details please refer to JEDEC J-STD-020D.
*** = Tolerance for time at peak profile temperature (t_p) is defined as a supplier minimum and a user maximum.

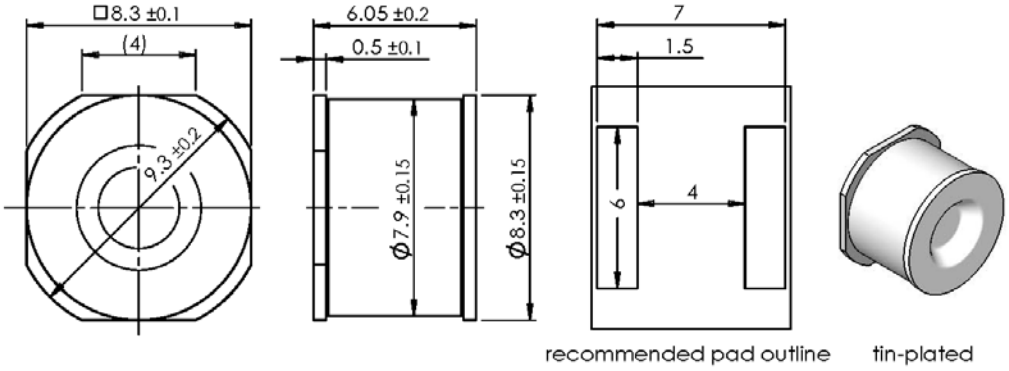
Wave soldering



Wave profile features	Pb-free assembly
Solder	Sn 95.5 / Ag 3.8 / Cu 0.7
Solder bath temperature	263 (±3) °C
Dwell time	< 3 s

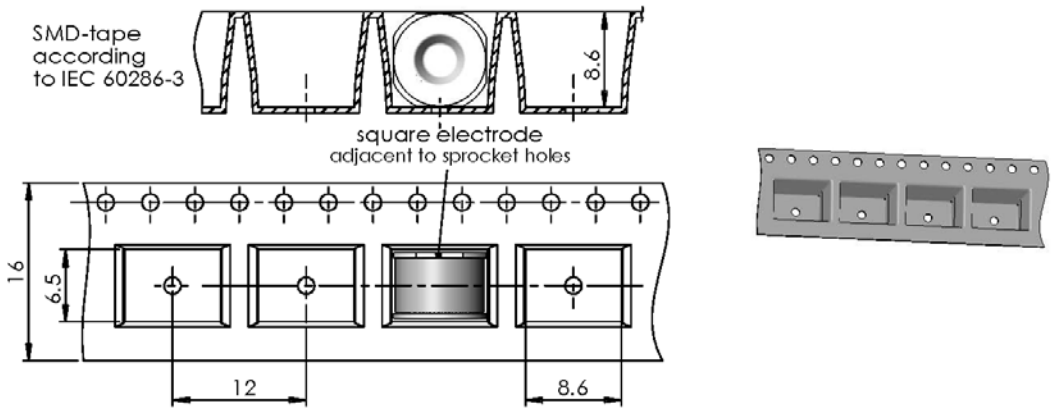
Soldering profile applied to a single soldering process.

Dimensional drawing in mm



Ordering code and packing advice

*B88069X1620**T602** = 600 pcs. on SMD-tape*



Cautions and warnings

- Surge arresters must not be operated directly in power supply networks.
- Surge arresters may become hot in case of longer periods of current stress (danger of burning).
- If the contacts of the surge arrester are defective, current stress can lead to the formation of sparks and loud noises.
- Surge arresters may be used only within their specified values. In case of overload, the lead contacts may fail or the component may be destroyed.
- Surge arresters must be handled with care and must not be dropped.
- Damaged surge arresters must not be re-used.

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